

PROJECT NUMBER: 1902
PROJECT TITLE: Tobacco Microbiology
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PERIOD COVERED: January, 1989

I. HOGSHEAD, BOX, AND BALE STUDY

- A. Objective: Microbially analyze burley tobacco stored in hogs-heads, boxes, and bales as part of a three year warehouse storage study and to determine the differences, if any, in the microbial numbers from the different containers.
- B. Results: Grade B57 from the 1986 crop has been examined. The bacterial count from box 6 was above the laboratory standard for burley tobacco; however, the remainder of the microbial numbers from other samples were within the laboratory limits (1).
- C. Plans: This is a continuing study.
- D. Reference:
 - 1. Crockett, E. A. Notebook #8681, pp. 176-178.

II. ALTERNATE HUMECTANT PROGRAM

- A. Objective: To determine the differences after warehouse storage, if any, in the microbial numbers between RL-TC, RL-150B, and RCB sheet material made with PG/G plus propylparaben (control) and Isosweet plus potassium propylparaben (test).
- B. Results: There were no differences in the microbial counts from the test vs. control sheets after nine (RL) and eight months of storage (RCB) (1).
- C. Plans: A memo is in preparation.
- E. Reference:
 - 1. Jones, J. Notebook No. 8590, p. 87.

III. ESTABLISHMENT OF A STANDARD OPERATING PROCEDURE (SOP) FOR HIC-2 (HUMIDAT)

- A. Objective: To develop a procedure for the rapid determination of OV from various tobaccos and tobacco products.
- B. Results: Several experiments designed to validate the use of the Humidat in determining OV were completed this month. Standard curves have been made for bright, burley, and oriental tobaccos (1,2).

C. Plans: Studies are continuing with recon (RL-TC, 150B, and RCB) and a SOP will be issued.

D. References:

1. Gaines, O. Proposed Procedure for the Evaluating the HIC-2 (Humidat). Memo to D. Ayers; 1988 December 8.
2. Gaines, O. PM Notebook No. 8690, pp. 95-97.

IV. SALMONELLA/MICROSOME (S/M) ASSAY: DECANOIC ACID STUDY

A. Objective: To determine if the IT CSC specific activity (S.A.) of 1R4F cigarettes is altered when decanoic acid is oversprayed onto the filler.

B. Results: Decanoic acid was dissolved in ethanol at concentrations of 25, 50, and 100 mg/ml and oversprayed onto 1R4F filler. The IT CSC S.A.s from the cigarette samples were compared to those of the solvent and 1R4F controls. The results showed that there were no statistically significant differences among any of the test samples and the controls (1).

C. Plans: There are no plans for further testing in this area.

D. Reference:

1. Thompson, L. H. Notebook No. 8731, pp. 42-51.

V. S/M ASSAY: YEAST ENCAPSULATED CIGARETTES (YEPO)

A. Objective: To evaluate IT CSC S.A. from one control and two test cigarettes which were prepared by incorporating into the filler (full-flavored blend) yeast encapsulated material; i.e., peppermint oil.

B. Results: The YEPO cigarettes were prepared at two concentrations, 110.2 and 1102 ppm for S/M evaluation. The results from four replicate smokings of each sample indicated that there were no differences in S.A. among the test samples or the control (1).

C. Plans: There are no immediate plans for further tests in this area.

D. Reference:

1. Thompson, L. H. PM Notebook No 8731, pp. 52-59.